

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A method for identifying objects in an image comprising:

receiving an image with a first resolution, the image representing a scene;

transforming the image at the first resolution to an image at a second resolution, the first resolution being higher than the second resolution;

processing the image at a the second resolution to identify an object in the image at the second resolution; and

selecting a detection algorithm from among plural detection algorithms based on a condition associated with the object identified at the second resolution; and

processing the image at the first resolution using the identified object identified at the second resolution to identify another object in the image at the first resolution according to a the selected detection algorithm, ~~selected from among plural detection algorithms based on a condition associated with the object identified at the second resolution, wherein the first resolution is higher than the second resolution.~~

2. (Currently Amended) The method of claim 1, further comprising:
transforming the image at the second resolution to an image at a third resolution, the second resolution being higher than the second resolution; and
processing the image at a the third resolution to identify yet another object, wherein the yet another object is employed in the identification of the object and the another object, ~~wherein the second resolution is higher than the third resolution.~~

3. (Currently Amended) The method of claim 2, ~~further comprising~~wherein:
the transforming of the image at the first resolution includes downsampling the image from the first resolution to the second resolution; and
the transforming of the image at the second resolution includes downsampling the image from the second resolution to the third resolution.

4. (Currently Amended) The method of claim 1, wherein at least one of the processing of the image at the second resolution and the processing of the image at the first resolution is performed as a function of a type of terrain in the image at the second resolution and the image at the first resolution, respectively.

5. (Original) The method of claim 4, wherein the type of terrain is identified using a priori information and a gray level co-occurrence identification.

6. (Currently Amended) The method of claim 1, further comprising:
determining whether the object and the another object are desired objects
based upon a context associated with at least one of the image at the first resolution
and the image at the second resolution.

7. (Original) The method of claim 1, wherein the object is a river.

8. (Currently Amended) The method of claim 2, wherein the processing
of the image at the third resolution comprises:

identifying portions of the image at the third resolution containing clouds;
and

identifying portions of the image at the third resolution containing bodies of
water, wherein if portions of the image at the third resolution are identified which
contain clouds or bodies of water, identifying the clouds or bodies of water as the yet
another object.

9. (Currently Amended) The method of claim 8, wherein the identified
portions of the image at the third resolution containing clouds or bodies of water are
employed in the identification of objects in the image at the second resolution and
other objects in the image at the first resolution.

10-49. (Canceled)

50. (Previously Presented) The method of claim 1, wherein the detection algorithm for identifying the other object at the first resolution is automatically selected from among the plural detection algorithms.

51. (Previously Presented) The method of claim 1, wherein the plural detection algorithms include at least two algorithms respectively corresponding to gray level co-occurrence identification, linear object identification, primitive extraction identification, cloud masking, river masking, activity detection identification, edge extraction identification, gradient magnitude thresholding, busy mask identification, gradient direction edge thinning, line extraction identification, segmentation, region merging, collinear line identification, parallel line identification, parallel edge identification, intensity valuation identification, intensity variance identification, small object detection, morphological filtering, structure detection, lines of communication detection, and contextual line reasoning.

52. (Currently Amended) The method of claim 2, wherein the selecting of the detection algorithm ~~processing of the image at the first resolution includes using the object identified at the second resolution to identify the other object according to a detection algorithm selected~~ includes selecting the detection algorithm from among the plural detection algorithms based on a the condition associated with the object identified at the second resolution, and a condition associated with the yet another object identified at the third resolution.

53. (New) The method of claim 1, wherein:

the processing of the image at the second resolution includes processing the image at the second resolution according to a first detection algorithm;

the selecting of the detection algorithm includes selecting a second detection algorithm, which is different from the first detection algorithm, from among the plural detection algorithms based on the condition associated with the object identified at the second resolution; and

the processing of the image at the first resolution includes processing the image at the first resolution according to the selected second detection algorithm.

54. (New) The method of claim 1, wherein the receiving of the image includes receiving the image at the first resolution from at least one of an imaging device and a photographic device.

55. (New) The method of claim 1, wherein the condition associated with the object identified at the second resolution includes at least one of a geographic location, a terrain type, a ground sample distance, weather, a time of day, temperature, a viewing condition, a band frequency of a sensor, a degree of freedom of the sensor, a viewing angle of the sensor, and a positional vector.

56. (New) The method of claim 1, comprising:

displaying at least one of the object identified at the second resolution and the another object identified at the first resolution on a display device.

57. (New) A computer-readable recording medium having a computer program recorded thereon that causes a computer to identify objects in an image, the program causing the computer to perform operations comprising:

receiving an image with a first resolution;

processing the image at a second resolution to identify an object in the image at the second resolution;

selecting a detection algorithm from among plural detection algorithms based on a condition associated with the object identified at the second resolution; and

processing the image at the first resolution using the object identified at the second resolution to identify another object in the image at the first resolution according to the selected detection algorithm.

58. (New) The computer-readable recording medium of claim 57, wherein the condition associated with the object identified at the second resolution includes at least one of a geographic location, a terrain type, a ground sample distance, weather, a time of day, temperature, a viewing condition, a band frequency of a sensor, a degree of freedom of the sensor, a viewing angle of the sensor, and a positional vector.

59. (New) The computer-readable recording medium of claim 57, wherein the program causes the computer to perform operations comprising:

transforming the image at the second resolution to an image at a third resolution, the second resolution being higher than the second resolution;

processing the image at a third resolution to identify yet another object; and
employing the yet another object in the identification of the object and the
another object.

60. (New) The computer-readable recording medium of claim 59, wherein
the operation of selecting the detection algorithm includes selecting the detection
algorithm from among the plural detection algorithms based on the condition
associated with the object identified at the second resolution and a condition
associated with the yet another object identified at the third resolution.

61. (New) The computer-readable recording medium of claim 57, wherein
the plural detection algorithms include at least two algorithms respectively
corresponding to gray level co-occurrence identification, linear object identification,
primitive extraction identification, cloud masking, river masking, activity detection
identification, edge extraction identification, gradient magnitude thresholding, busy
mask identification, gradient direction edge thinning, line extraction identification,
segmentation, region merging, collinear line identification, parallel line identification,
parallel edge identification, intensity valuation identification, intensity variance
identification, small object detection, morphological filtering, structure detection, lines
of communication detection, and contextual line reasoning.

62. (New) The computer-readable recording medium of claim 57, wherein:
the operation of processing the image at the second resolution includes
processing the image at the second resolution according to a first detection
algorithm;

the operation of selecting the detection algorithm includes selecting a second
detection algorithm, which is different from the first detection algorithm, from among
the plural detection algorithms based on the condition associated with the object
identified at the second resolution; and

the operation of processing the image at the first resolution includes
processing the image at the first resolution according to the selected second
detection algorithm.

63. (New) The computer-readable recording medium of claim 57, wherein
the program causes the computer to determine whether the object and the another
object are desired objects based upon a context associated with at least one of the
image at the first resolution and the image at the second resolution.

64. (New) The computer-readable recording medium of claim 57, wherein
the program causes the computer to display at least one of the object identified at
the second resolution and the another object identified at the first resolution on a
display device communicatively connected to the computer.